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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/696,932      | 10/30/2003  | James F. McGuckin JR. | 1255                | 1044             |

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02/06/2012

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| EXAMINER |
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WEBB, SARAH K

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| ART UNIT | PAPER NUMBER |
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3731

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| MAIL DATE | DELIVERY MODE |
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02/06/2012

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/696,932 | <b>Applicant(s)</b><br>MCGUCKIN ET AL. |  |
|                              | <b>Examiner</b><br>SARAH WEBB        | <b>Art Unit</b><br>3731                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2011.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 5) ☒ Claim(s) 5-9, 11, 13, 15 and 23-27 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 5-9, 11, 13, 15 and 23-27 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____.                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/14/2011 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claim 23 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

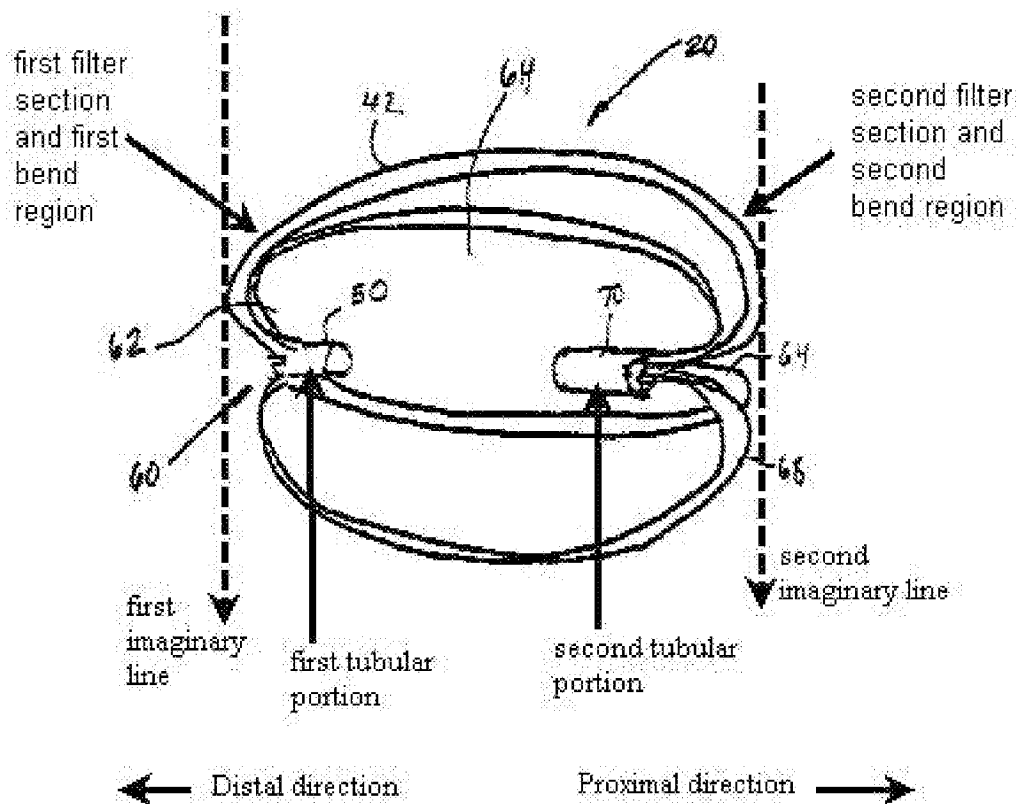
3. Claims 7, 9, 23, 24, and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,589,265 (Palmer et al.).

Palmer discloses an intravascular device in Figure 5 that comprises tubular member (40) with a plurality of elongated cutouts forming a series of parallel elongated

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struts (42) (column 4, lines 41-44). The device is in the deployed configuration in the illustration of Figure 5, wherein the struts (42) are spaced from one another and form a "mounting section." The device is made of a resilient material and capable of moving to an insertion configuration within a delivery device, as shown in Figures 1 and 13 (column 4, lines 16-20; column 6, lines 1-17).

The struts (42) have inwardly bent regions (66) at both the proximal and distal ends of the device, wherein the struts bend towards the center of the filter (column 5, lines 10-24). This structure meets the requirements of "a first filter section" and "a second filter section." Each of the filter sections terminate in a tubular portion (50 and 70) (column 5, lines 15-24). A first bend region (66) is positioned distal of the first tubular portion (50) and a second bend region (66) is positioned proximal of the second tubular portion (70). Imaginary lines intersecting the bend regions (66) of the struts and perpendicular to the longitudinal axis of the device (20) do not intersect either of the tubular portions (50 and 70).



The term “vessel filter” is considered to be functional language that is not given full patentable weight. The prior art is not required to explicitly disclose this function, but merely have capability of performing the recited function. In this case, the Palmer device includes all the required structural components and is configured for deployment in a blood vessel (column 4, lines 1-10). Although Palmer does not disclose that the device (20) functions to filter a blood vessel, its structure provides the *capability* of filtering a vessel.

Regarding claim 7, the device may be formed of shape memory material, such as nitinol (column 6, lines 1-10).

Regarding claim 9, Palmer discloses that although 4 struts spaced 90 degrees apart are illustrated, the device may comprise 6 equally spaced struts that are 60 degrees apart (column 4, lines 26-29).

Regarding claim 24, the length of the struts exceeds a diameter of the filter.

Regarding claim 27, in the straight unexpanded configuration of the device (20) shown in Figure 1, the struts originate from a proximal end of the first tubular portion (50) and from a distal end of the second tubular portion (70).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 6, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmer et al. in view of USPN 6,443,972 (Bosma et al.).

Palmer fails to meet the requirement that the longitudinal struts have a roughened surface. Bosma '972 teaches that struts of an endovascular device can have a roughened surface (30) or a plurality of vessel engaging members (27) (see Figures 9A-C) to increase retention of the filter within the body lumen (column 6, lines 13-21). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Palmer device so that the struts include a roughened surface or a plurality of vessel engaging members, as taught by Bosma '972, as this

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combination of known elements obtains the predictable result of enhancing retention of the device at the desired treatment site within the body.

5. Claims 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmer et al. in view of US Patent App. Pub. No. 2002/0058911 (Gilson et al.).

Palmer fails to meet the requirement that the ends of at least one strut are twisted out of phase, but Gilson teaches that it is known to form longitudinal struts of a cage-like endovascular device in this manner (see Figures 15-22). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the struts of the Palmer device to have at least one strut out of phase with the others, as taught by Gilson, as this modification merely involves a substitution of known strut shapes to obtain the predictable results of forming an endovascular device.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Palmer et al. in view of USPN 7,097,651 (Harrison et al.).

Palmer fails to form an angled portion of the struts in the bent region to have a width less than the portion of the struts parallel to the longitudinal axis of the device, but Palmer does disclose that the struts (42) may vary in width (column 4, lines 44-45). Harrison discloses another cage-like endovascular device with elongated struts that terminate in tubular portions. As shown in Figure 1C, the struts include bent regions at either end (28, 30). Harrison teaches that it is known to form portions of the struts near the bent regions to have a smaller width, as indicated by references (70) and (80) in Figures 2 and 3, respectively, in order to reduce stress concentration and improve fatigue resistance (column 6, line 54 – column 7, line 5). It would have been obvious to

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modify the angled portions of the struts of the Palmer device so that they have a width less than the width of the straight portions of the struts in the mounting section, as Harrison teaches that this improves the performance of the device and increases the number of times it may be expanded.

7. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmer et al. in view of USPN 6,241,746 (Bosma '746).

Palmer fails to include ribs extending from adjacent struts that terminate at a joint that is free from connection to the struts. Bosma '746 discloses another vascular device in Figures 1-43 comprising a plurality of longitudinal struts (12) that are spaced from one another in a middle "mounting section" and converging to form "filter sections" at either end of the device. Bosma '746 teaches that the device should include circumferential resilient supports to aid in holding the device in place within the vessel (column 2, lines 64-68). As clearly shown in Figures 1-4, the circumferential ribs have two sections joined at a region that is unattached to the struts (12). It understood that the circumferential ribs would be curved, as viewed along the longitudinal axis (Figure 4A). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Palmer device to include circumferential ribs extending between adjacent struts, as taught by Bosma '746, in order to provide radial support to the longitudinal struts and maintain the position of the device within in the body.



***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Webb whose telephone number is (571)272-5749. The examiner can normally be reached on Monday through Friday from 9:00 AM-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, ***please contact the examiner's supervisor, Tom Hughes, at (571) 272-4357***. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

***If there are any inquiries that are not being addressed by first contacting the Examiner or the Supervisor, you may send an email inquiry to***

***TC3700\_Workgroup\_D\_Inquiries@uspto.gov.***

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. W./  
Examiner, Art Unit 3731

/Kathleen Sonnett/  
Primary Examiner, Art Unit 3731